

35. (New) The impurity-gas removing method according to claim 34, wherein said reaction gas is the same as a gas contained the process gas.

36. (New) The impurity-gas removing method according to claim 34, wherein a supply amount of said reaction gas mixed with the impurity gas is at least twice that of the impurity gas.

37. (New) The impurity-gas removing method according to claim 34, wherein said process gas includes TiCl_4 , and said reaction gas includes NH_3 .

38. (New) The impurity-gas removing method according to claim 34, wherein said process gas includes WF_5 , and said reaction gas includes NH_3 .

39. (New) A method for removing impurity gas discharged from a process apparatus used for processing objects by using a trap mechanism, comprising:

evacuating insides of the process apparatus and trap mechanism;

condensing and solidifying the impurity gas so that the solidified gas is trapped in the trap mechanism; and

causing an oxidative gas to contact the impurity gas trapped in the trap mechanism to oxidize the impurity gas, thereby stabilizing the impurity gas trap mechanism to oxidize the impurity gas, thereby stabilizing the impurity gas.

40. (New) The impurity-gas removing method according to claim 39, when said oxidative gas is made to contact said reaction by-product in said trap mechanism, said process apparatus is evacuated with an inverse diffusion coefficient by an exhaust bypass pipe by a pump provided to bypass said trap mechanism, the inverse diffusion coefficient being set so that the oxidation gas is prevented from being introduced into the process apparatus through the exhaust bypass pipe.

41. (New) The impurity-gas removing method according to claim 39, wherein stabilizing of said reaction byproduct sequentially and repeatedly is performed by trapping